

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for sequestering carbon emitted into the atmosphere, characterized in that it comprises:
 - a) a step for concentrating CO₂ in the liquid phase;
 - b) a step for electro-reduction in an aprotic medium to a compound in which the carbon changes to oxidation number +3 in the form of oxalic acid or formic acid;
 - c) if appropriate, a step for re-extracting oxalic or formic acid in the aqueous phase; and
 - d) a step for mineralization by reacting said ~~compound~~ oxalic acid or formic acid with a compound of an element M, producing a mineral in which the atomic ratio C/M is about 2/1.
2. (Currently Amended) A process according to claim 1, characterized in that step a) for concentration in the liquid phase ~~consists of~~ comprises liquefying CO₂, the liquid CO₂ then being obtained under pressure, ~~for example in up to~~ the supercritical state.
3. (Currently Amended) A process according to claim 1, characterized in that step a) for concentration in the liquid phase ~~consists of~~ comprises absorbing CO₂ in a polar aprotic liquid, not miscible with water or miscible with water in various proportions.
4. (Currently Amended) A process according to claim 1, characterized in that step a) for concentration in the liquid phase ~~consists of~~ comprises absorbing CO₂ in an aprotic ionic liquid not miscible with water or miscible with water in various proportions.

5. (Currently Amended) A process according to claim 4, characterized in that said ionic liquid ~~consists of~~ comprises 1-butyl-3-methylimidazolium hexafluorophosphate.
6. (Currently Amended) A process according to claim 1, characterized in that step a) for concentration in the liquid phase ~~consists of~~ comprises absorbing CO₂ in an aqueous phase containing an alcohol and/or an amine.
7. (Original) A process according to claim 1, characterized in that step a) for concentration in the liquid phase ~~consists of~~ comprises absorbing CO₂ in the hydrated form, said concentration being activated by an enzymatic pathway.
8. (Original) A process according to claim 7, characterized in that the hydration activating enzyme ~~is~~ comprises carbonic anhydrase.
9. (Previously Presented) A process according to claim 8, characterized in that the solution obtained is then recycled to a process for absorption of CO₂ in an aqueous phase in the presence of an alcohol and/or amine.
10. (Previously Presented) A process according claim 9, characterized in that the aqueous solution obtained is recycled to a liquefaction process of CO₂ under pressure.
11. (Currently Amended) A process according to claim 6, characterized in that the aqueous solution obtained is transferred by a liquid-liquid extraction process to an ionic liquid medium which is insoluble in water ~~by a liquid-liquid extraction process~~.
12. (Currently Amended) A process according to claim 1, in which the electro-reduction step b) is carried out at a pH in the range of 3 to 10 and with an anode maintained at a potential of +0.5 to -3.5 volts with respect to the normal hydrogen electrode.

13. (Currently Amended) A process according to claim 12, in which the pH is in the range of 3 to 7.
14. (Previously Presented) A process according to claim 12, in which the anode used in the electro-reduction step is constituted by platinum, diamond-doped with boron or carbon doped with nitrogen.
15. (Previously Presented) A process according to claim 1, in which the electro-reduction step b) is carried out in liquid CO₂ under pressure.
16. (Currently Amended) A process according to claim 1, in which the compound from electro-reduction step b) ~~is~~ comprises oxalic acid or an oxalate.
17. (Currently Amended) A process according to claim 16, in which the oxalic acid or oxalate, obtained in a non-aqueous medium, is re-extracted ~~using~~ by an aqueous phase.
18. (Previously Presented) A process according to claim 1 in which, at the end of step a), liquid CO₂ is injected into a subterranean CO₂ store.
19. (Previously Presented) A process according to claim 18, in which electro-reduction step b) is carried out in the subterranean CO₂ store.
20. (Currently Amended) A process according to claim 1, in which the final mineralization step ~~consists of~~ comprises an attack of a carbonated mineral by an aqueous solution of oxalic acid or formic acid from the electro-reduction step (b).
21. (Currently Amended) A process according to claim 19, in which said carbonated mineral ~~consists of~~ comprises a calciferous or magnesia-containing carbonated mineral.
22. (Previously Presented) A process according to claim 1, in which the element M is calcium and the mineral formed is Whewellite, CaC₂O₄·H₂O.

23. (Currently Amended) A process according to claim 1, in which the mineralization step ~~takes place by~~ comprises bringing the aqueous solution of oxalic acid or formic acid from the electro-reduction step into contact with a calciferous or magnesia-containing sedimentary rock.
24. (Currently Amended) A process according to claim 1, in which the final mineralization step ~~is carried out by~~ comprises injection into the substratum.
25. (New) A process according to claim 2, in which the electro-reduction step b) is carried out in liquid CO₂ under pressure.
26. (New) A process according to claim 25, in which the final mineralization step comprises an attack of a carbonated mineral by an aqueous solution of oxalic acid or formic acid from the electro-reduction step (b).
27. (New) A process according to claim 26, in which said carbonated mineral comprises a calciferous or magnesia-containing carbonated mineral.